Title: RECEIVER GAIN MANAGEMENT

Page 2 kt: 778.056US1



IN THE CLAIMS

The claims are set forth as follows:

1. (Original) A method of calibrating gain of multiple receivers, the method comprising:

setting receiver filters to a narrow bandwidth;

sampling the receive band with the receiver filters across substantially all of the receive band:

measuring received power at each sample; and

calibrating the receiver gains as a function of the minimum received power across the receive band.

- 2. (Original) The method of claim 1 wherein the narrow bandwidth is approximately 100 KHz or less.
- 3. (Original) The method of claim 1 wherein the number of samples per receiver filter is between approximately 5 and 10 across a receive band of approximately 25 MHz.
- 4. (Original) The method of claim 1 and further comprising waiting at each sample for the received power to settle.
- 5. (Original) The method of claim 4 wherein the wait is approximately three seconds.
- 6. (Original) The method of claim 1 wherein the receivers are CDMA channel receivers.
- 7. (Original) The method of claim 6 wherein the CDMA channel is approximately 1.23 MHz wide, and the narrow bandwidth is approximately 100 KHz.

Title: RECEIVER GAIN MANAGEMENT

Page 3 Dkt: 778.056US1

- 8. (Original) The method of claim 6 wherein there are three CDMA receivers.
- 9. (Original) A radio module for a base station, the module comprising:
 - a receiver;
 - an adjustable receiver filter;
 - a power detector; and
- a micro-controller that adjusts the receiver filter to sample a narrow bandwidth across a receive band and adjusts a gain of the receiver as a function of power detected.
- 10. (Original) The radio module of claim 9, wherein the gain is adjusted based on minimum power detected over the samples.
- 11. (Original) The radio module of claim 10, wherein the narrow bandwidth is approximately 100 KHz.
- 12. (Original) The radio module of claim 10, wherein the receiver is a receiver for a CDMA channel.
- 13. (Original) The radio module of claim 9, and further comprising two additional radio modules, each corresponding to a different CDMA sector.
- 14. (Original) The radio module of claim 9 and further comprising a low noise amplifier and an adjustable attenuator.
- 15. (Original) The radio module of claim 14 and further comprising means for selectively bypassing or enabling the low noise amplifier.
- 16. (Original) The radio module of claim 9 wherein the receiver comprises a duplexer coupled to a pair of antennas for implementing receive diversity.

17. (Original) A method of detecting interference, the method comprising: setting a bandwidth for multiple receiver filters to a portion of a channel bandwidth that is a function of the number of such receiver filters;

merging the receiver filters to significantly cover the bandwidth of a channel; moving the merged receiver filters to selected channels to identify whether interference is narrowband or wideband; and

increasing the receiver attenuation to protect the receiver from operating in the non-linear region and prevent an ADC (analog to digital converter) from saturation when a strong interfering signal is present.

- 18. (Original) The method of claim 17 wherein N received filters are used, and each covers approximately $1/N^{th}$ of the bandwidth of the channel, where N can be any integer number.
- 19. (Original) The method of claim 17 wherein the channel is a CDMA channel having a bandwidth of approximately 1.23 MHz.
- 20. (Original) The method of claim 17 and further comprising measuring received power through each filter at the selected channels.
- 21. (Original) The method of claim 20 wherein the interference is identified as narrowband if the difference of received power across all filters is substantially large at a selected channel.
- 22. (Original) The method of claim 20 wherein the interference is identified as wideband if the difference of received power across all filters is small at a selected channel.
- 23. (Original) A micro-controller comprising:

RESPONSE UNDER 37 CFR § 1.111

Serial Number: 10/815,261 Filing Date: March 31, 2004

Title: RECEIVER GAIN MANAGEMENT

means for setting a bandwidth for multiple receiver filters to a portion of a channel bandwidth that is a function of the number of such receiver filters;

means for merging the receiver filters to significantly cover the bandwidth of a channel; and

means for moving the merged receiver filters to selected channels to identify whether interference is narrowband or wideband.

24. (Original) A device comprising:

means for detecting interference; and

means for adjusting receiver gain based on narrowband sampling of the noise floor.